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FAXED 26/9/05

The International Preliminary Examining Authority
The European Patent Office
Erhardstrasse 27
Munchen D-80469
Germany

Our Ref: KJL/DC/P5367

Your Ref:

Date: 26th September 2005

FAX ONLY

Dear Sirs

Re: PCT Patent Application No. PCT/GB2004/005166
claiming priority from UK Patent Application No. 0328558.2
An improved feed mechanism for a medical device
Zi Medical PLC
Our file P5367

We are replying to the Written Opinion of the Searching Authority dated 12th April 2005. Please find enclosed amendments under Article 34 consisting of amended pages 1 to 3, 13 to 15 to replace the corresponding pages currently on file. The Demand and fees for International Preliminary Examination are being submitted separately.

The claims have been restricted to the preferred embodiment of the present invention, being a syringe driver assembly. It is clear that none of the prior art documents describe a syringe driver assembly having driver means comprising a motor-driven unthreaded shaft having at least one bearing mounted obliquely to the shaft and having at least one point of contact therewith, as is acknowledged by the Examiner. However, it is submitted that the claimed subject matter is not obvious over the prior art documents since the skilled person would not regard the claimed feature to be a normal option for including in a syringe driver assembly.

It is submitted that document D5 (US 5006112) is the closest prior art, being directed to a syringe driver assembly. The assembly, as with all other previous syringe driver assemblies, employs a motor-driven threaded shaft to impart movement to the syringe plunger. The Examiner submits that it would be obvious to incorporate the mechanism described in the documents D1 to D4 into the syringe driver assembly of D5 in order to arrive at the claimed invention. However, we do not believe that this objection is justified since there is no incentive for a skilled person, upon reading D5, to combine this with the teachings of D1 to D4. In this respect, it should be noted that a syringe driver assembly has to move a syringe plunger extremely accurately and must be wholly reliable. Furthermore, the assembly employs small parts. In contrast, the devices described in D1 to D4 relate to industrial appliances of a larger size that do not require highly accurate movement of the shaft. It would not be obvious to the skilled person that such a mechanism could be adapted for a syringe driver assembly for

effecting movement of a syringe plunger and the skilled person would not look to documents D1 to D4 to solve the problem addressed by the present invention.

The present invention involves inventive skill in employing an entirely new mechanism for driving a syringe plunger in place of the conventional threaded screw mechanism. The present invention has clear advantages over the prior art mechanism, most notably being the elimination of problems caused by wearing of the threaded bar and that the bearings are able to engage and disengage from the smooth shaft instantaneously. Furthermore, the present invention prevents a reduction in performance of the syringe driver assembly that can occur when dirt ingresses into the threads of a threaded bar. It has also been surprisingly found that the mechanism provides for a smoother "feel" for the user when the actuator is being moved along the shaft during disengagement of the bearings. Yet a further benefit provided by the present invention is that the actuator can be moved to any point along the bar and is not dictated by the position of the thread. Thus, it is submitted that the claimed subject matter involves an inventive step.

The prior art document, D5, has been identified in the description and briefly discussed. D1 – D4 are not considered particularly relevant to this invention and therefore have not been identified. Claim 1 has been re-cast in two part form in accordance with Rule 6.3 (b) PCT.

We trust that a favourable International Preliminary Examination Report will follow in due course.

Yours faithfully

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Enc.